

2

THE
ASSURANCE
OF
DISEASED AND DOUBTFUL LIVES

ON
A New Principle,

MORE ADVANTAGEOUS AND EQUITABLE TO POLICY-HOLDERS
THAN THE SYSTEM HITHERTO ADOPTED;

BY
MORRICE A. BLACK,

Actuary to the London and Yorkshire Assurance Company.

WITH

OBSERVATIONS ON THE CHARACTERISTICS OF ASSURABLE
AND NON-ASSURABLE LIVES,

BY
A. P. STEWART, M.D., F.R.C.P.,

Physician to the Company.

SECOND EDITION, REVISED.

PUBLISHED BY
W. S. D. PATEMAN, WINE OFFICE COURT, FLEET STREET,
LONDON.

1862.

PRICE ONE SHILLING AND SIXPENCE.

[*The Authors reserve the right of Translation.*]

ENTERED AT STATIONERS' HALL.



THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LONDON:

T. SATCHELL AND CO., PRINTERS,
31, ELY PLACE.

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

LIBRARY OF THE NEW YORK

CONTENTS.



CHAPTER I.

ON THE SELECTION OF LIVES FOR ASSURANCE.

CHAPTER II.

THE SYSTEM ON WHICH DISEASED AND DOUBTFUL LIVES
HAVE HITHERTO BEEN ASSURED.

CHAPTER III.

THE NEW SYSTEM PROPOSED FOR THE ASSURANCE OF
DISEASED AND DOUBTFUL LIVES.

CHAPTER IV.

THE ADVANTAGES OF THE NEW SYSTEM OF ASSURING
DISEASED AND DOUBTFUL LIVES CONTRASTED WITH
THE METHOD HITHERTO ADOPTED.

DIAGRAM.

OBSERVATIONS ON THE CHARACTERISTICS OF ASSURABLE AND NON-
ASSURABLE LIVES.

CONTENTS

PREFACE

THE AUTHOR'S NOTE TO THE READER

CONTENTS

THE AUTHOR'S NOTE TO THE READER

THE AUTHOR'S NOTE TO THE READER

CONTENTS

THE AUTHOR'S NOTE TO THE READER

THE AUTHOR'S NOTE TO THE READER

CONTENTS

THE AUTHOR'S NOTE TO THE READER

THE AUTHOR'S NOTE TO THE READER

THE AUTHOR'S NOTE TO THE READER

CONTENTS

THE AUTHOR'S NOTE TO THE READER

THE AUTHOR'S NOTE TO THE READER

ASSURANCE OF DISEASED AND DOUBTFUL LIVES.

CHAPTER I.

ON THE SELECTION OF LIVES FOR ASSURANCE.

MUCH misapprehension prevails regarding the standard of health requisite for Life Assurance. Many think that Offices are needlessly particular in their selection of lives; an opinion which is universally held by that numerous class of persons who, though not diseased, are deteriorated in health. The existence of this popular fallacy is by no means surprising. So intent have the energetic advocates of Life Assurance been on making known its principles, enforcing its necessity, and exhibiting the benefits accruing to Policy-holders, that they have passed over in comparative silence the pre-requisites for admission as a Policy-holder in a Life Office. Hence the impression left on the public mind is, that pretty nearly all who are free from active disease may avail themselves of Life Assurance. The natural consequence of this mistaken idea is, that many a rejected applicant is not only disappointed, but conceives himself ill-treated by the Company which declines his proposal, and Offices are therefore often subjected to unjust obloquy. So bitter, indeed, is the feeling sometimes entertained, that it would almost seem as if the rejected applicant imagined the Board of Directors or Medical Officer to be actuated rather by private pique than by a stern sense of public duty. And we may safely affirm, that of all the official duties he has to perform, none is more distasteful to the Secretary of a Life Office than that of announcing to an applicant for Assurance that his proposal has been declined.

Before explaining the New System proposed by the Writer for

the assurance of Diseased and Doubtful Lives, it is important to shew that the great care exercised by Offices in the selection of lives, is not more than is necessary to protect them from greater loss than the Premiums provide for. In other words, that their apparently extreme carefulness is indispensable, in order that the number of deaths shall not exceed the number indicated by the Mortality Table on which their rates of premium are based.

With this view let us proceed now to enquire what effect is produced on the ultimate or final mortality of a Life Office when select lives only are assured. The effect, we mean, after a generation of lives have died off the books of an Office. All experience has gone to prove that the mortality among such lives is not permanently below that to be looked for from the most authentic and reliable Mortality Tables, in confirmation of which we adduce the following reasons:—

I.—Although the Policy-holders of a Society when first admitted are select lives, and healthier than the community at large, they very soon degenerate, and become in a few years no better than the common average of the whole population.

II.—In the words of Dr. Milne, the compiler of the Carlisle table, “The more precarious a life is, the stronger is the inducement for parties interested in its continuance to get it insured, so that bad risks are frequently offered to Companies. And many proposals for Assurance are accepted by the Directors, that are thought very eligible at the time, in cases where they are not aware of any specific objection to the life proposed.”

III.—The majority of lives assured are drawn from the Professional, Commercial, and Trading classes of the community. The anxieties and over-exertion incident to such callings tend to impair the constitution, and consequently shorten the lives of those who follow them.

IV.—Selection is exercised against an Office in this way,—When a Company issue a Policy they are bound to continue the contract until it be terminated by the assured, whereas the assured is at liberty to cancel it at pleasure. Of course a Policy-holder is not likely to drop his assurance unless he is in good health, and therefore the majority of dropt policies are on the best lives. If the Policy-holder has become afflicted with any disease, he most tenaciously holds the Company to the risk, and pays his recurring premium with remarkable punctuality. From this circumstance a large proportion of unhealthy lives are found among persons assured in an Office after a period of ten years has elapsed.

Without enumerating, as we might, other causes which have a like bearing on the value of lives, we are warranted in concluding that it has been fully proved—not merely by observation, but by the actual experience of various Institutions which have assured lives for upwards of a century—that the mortality among assured lives is not more favourable than the mortality arising out of a mixed population.

But it may still be asked by those not familiar with the subject, How can this be, if the rates of premium are deduced from a table of Mortality including the whole population, and so including lives good, bad, and indifferent—those in rude health, as well as those in every stage of disease? We cannot better illustrate at once the feasibility and unfairness of assuring every description of life than by supposing a scheme for Universal National Assurance. Let us imagine the enactment of a Law which should compel every man, on attaining a certain age, to assure his life, the only condition being the payment of a certain annual premium, regulated according to age. In consideration of such premium, persons in every stage and with every kind of disease would be as welcome as the strong and healthy man, the drunkard would be received on a par with the temperate man, and the most vicious on as easy terms as the most exemplary, and at each man's death, however soon that might happen, his representatives would receive the sum assured. It needs no illustration to shew that this compulsory premium, though for so good an object in the abstract, would become a tax more unequally adjusted than any hitherto imposed. If such a scheme were made Law, no doubt a Government could work it out with safety as a financial measure, and in many instances much misery would be averted by the timely aid provided. But where would be the common honesty of such a law? We need scarcely say that such a scheme would be resented as flagrantly impolitic and unjust, besides being a premium on vice, and an incentive to crime. The prospects of the near relatives of the diseased and dying man would brighten in proportion as his disease increased, and just as the drunkard became more thoroughly besotted would his family become rich in prospect of the Reversion to fall in at his death. Still, notwithstanding these early claims, the fund would come all right in the end, and there would be sufficient to meet the demands of the longest liver.

The schemes of the Socialists for a re-distribution and universal equalization of property are not a whit less just or more subversive of public morals, than would be such a compulsory plan of

National Assurance. It must therefore we think be evident, that by rejecting all but select lives, no violence is done to the fundamental principle on which Life Assurance rests, viz., to equalize the risks of life, and so effect by combination what the individual cannot do. This is what Life Assurance carries out. But there would be no equalization of the risk of life unless every member were admitted with reference to the same standard of health as those who had preceded him. Any scheme for an indiscriminate admission of lives for Assurance will therefore continue to be Utopian until such an improvement takes place in the morals, and consequently in the physical health and well-being of the community, as will enable us to dispense with those precautions which, in the present state of society, prudent men are compelled to adopt in their dealings with those around them.

CHAPTER II.

THE SYSTEM ON WHICH DISEASED AND DOUBTFUL LIVES HAVE HITHERTO BEEN ASSURED.

We have already explained the necessity for assuring only perfectly healthy lives at the ordinary rates of premium. But it does not therefore follow that it is incompatible with the Principles of Life Assurance to extend the system on an equitable basis to the class which we have characterized as Doubtful, and likewise to the class denominated Diseased or Invalid. Some forty years ago, the idea of assuring any other kind of lives than select ones, such as are described in the last chapter, would have been considered a perilous or rash enterprise. The thing was nevertheless attempted, and has been carried out with a reasonable measure of success and safety on the part of more than one Company, but with a very questionable degree of equity to the individual persons assured. The practice of assuring lives deviating from the recognized standard of health was first projected, we believe, by the late Dr. George Pinckard. That gentleman established an Office in the year 1824 for the avowed purpose of assuring lives that were inadmissible in other Offices at the usual rates of premium, owing to their deteriorated health or tendency to some disease. The Actuary of the Office referred to, in a paper on the practice and experience of his Company, states that "in the absence of any trustworthy data which might serve as a guide, the projector of the Company sought to accomplish with safety the object he had in view, by having on his Board of Directors Medical men conversant with particular kinds of disease." It is then an acknowledged fact, that the first Office who assured Diseased and Invalid Lives had no data to guide them in estimating the increased risk and the corresponding extra premium for such cases. It continues to be a fact, that all the Offices who are now assuring lives more or less diseased have no data to guide them to the

correct equivalent for the extra risks they incur. The Actuary of the Office already alluded to gives it as his opinion, "that there does not as yet exist sufficient data for the formation of Tables for the Assurance of such lives. Tables formed from the mortality on all the diseased lives taken indiscriminately would evidently be of very little value, as the premium required for bronchitis or liver complaint would not suffice for a person suffering under consumption or disease of the heart:" and he adds, "if practical Tables for each separate disease are ever to be formed with confidence, it can only be when experience has become much more extensive."

Our next enquiry naturally is—If there be no correct Diseased Mortality Tables, what system has been and continues to be pursued by Offices in their absence? On what principles are the extra premiums for the Assurance of Diseased and Invalid Lives assessed? The plan is this:—The applicant for Assurance, after lodging a proposal in the Office stating every particular relating to Health, Habits, and Family History, has next to appear before the Medical Officer or Referee of the Company, for the purpose of enabling him to testify, after personal examination, as to the soundness of the life in every particular, and generally as to the fitness of the individual for admission as a first-class life. The result of the examination frequently is that the Medical Referee has either to recommend the life to be declined, or accepted with a number of years added to the age of the proposer, varying from one to twenty-five. Out of the total number of proposals received by Life Offices, perhaps one in three, certainly one in four, are either declined or accepted at an extra premium. Most of the old Life Offices, and some even of the modern, accept only first-class Lives. In that case, if the Medical Officer find the life below the perfect standard which he has set up for admission to the Office he represents, his only alternative is to recommend the case to be declined. If, however, he should be examining for an Office willing to assure Lives in less than robust health, the Medical man is invited to state his opinion of the extent to which he thinks the life is deteriorated, and the number of years by which the individual's expectation of life will be shortened. More generally the question is put,—How many years ought to be added to the present age of the proposer to compensate for the extra risk the Office incurs? The Board of Directors then come to a conclusion from the information supplied by the papers, aided by the judgment and experience of their Actuary and Secretary; but they are

principally guided to a decision by the opinion of their Medical Examiner, founded, as it is, on a personal examination of the Applicant.

We now proceed to investigate the following considerations which are involved in the practice now in operation.

I.—Is there any system in the plan pursued?

II.—Are Diseased Lives assured on equitable terms under it?

III.—Does it secure a uniformity of charge by different Companies for extra risk on Diseased Lives?

First.—*Is there any system in the plan pursued?* Life Assurance, as we have elsewhere shewn, could not be carried on without the valuable services of the Medical Profession. Their services are even more valuable when they are asked to deal with the admission of Lives Deteriorated or Diseased. In dealing with such cases, it will we think be admitted, that it is scarcely possible for them to avoid error in assessing the proper premium; they are so to speak “all at sea,” having no guide or criterion to go by. So much so is this the case, that the number of years to be added to a Life becomes a question on which Medical men themselves entertain very opposite opinions. In attempting to arrive at the correct number of years by which the expectation of a life will be shortened, they have to enter on an investigation in which Medical Science enables them to arrive at but half the truth necessary to come to a correct conclusion. The proper data may be in existence, but if it is, we have it only in a raw state, for it has not been applied to the construction of Diseased Life Tables. Leaving out of the question the necessity for Tables formed from experience, we proceed to mention a few of the causes which will more or less affect the correctness of the plan at present pursued, and cause Medical men to err at one time in favour of the assured, and at another time in favour of the Office.

I.—The Medical Referee's knowledge and experience is doubtless the main element, and at first sight it might be thought the only disturbing element. We make no further comment on this point than just to mention one fact, viz.—That Offices find a marked difference in the Mortality among lives examined and passed as first-class by some Medical men, from the Mortality among an equal number of lives examined and also passed as first-class by others. Whether the benefit to the Office be more apparent among the lives examined personally at the Chief Office by the Company's Physician, or among the lives passed by the Referees in the Country, we shall not be so invidious as to state,

inasmuch as the data on which we found our opinion have not been made public. But the fact is now pretty well established that a marked difference does exist, and therefore that a Medical man's estimate of what constitutes a first-class life is frequently at fault. If that be so when first-class lives only are concerned, there is much more reason to suppose that errors in judgment will exist in respect of lives deteriorated in health, when the nicest discrimination is necessary to protect the Company and yet not to overcharge the individual.

II.—If an Office have a Physician or Referee eminent both for his Medical Knowledge and Experience, but if he has made a particular disease a special branch of study, is it unlikely that his special knowledge may not cause him to take an exaggerated view of the case before him? or, on the other hand, that his special information will not cause him to undervalue the risk? Either extreme is not an unfrequent result of confining one's attention exclusively to one subject. Again, the fact of a Medical Referee having lost several patients from the disease which the person he is examining suffers from, or has a tendency to, will, we think, bias his judgment, and cause him to think the disease more fatal and the mortality greater than it really is; whereas, perhaps, more was attributable to untoward or unforeseen circumstances. An opposite result would take place if he had been singularly fortunate with such cases.

III.—It is possible, we think, that a Medical man may sometimes err by putting on a larger addition than he thinks necessary, for the sake of his professional reputation. He will naturally enough be anxious to protect himself in case his judgment should be called in question by the Company he represents, in the event of the Policy becoming an early claim.

IV.—Another reason, and it is one of no small importance—The majority of lives Assured are examined by Referees in the Country, and they are subsequently submitted to the Company's Physician at the Chief Office. Now, the Referee's report may appear to be unsatisfactory, when, in reality, the damaging facts may only arise from want of minuteness in detailing particular symptoms. The report, perhaps, does not disclose the whole truth, but its examination may elicit enough to justify suspicion. We fully believe many proposals examined by the Referees in the country are passed with additions, when a little correspondence between the Medical men would make the matter more clear, and render the extra charge unnecessary.

V.—We have reason to believe that sufficient importance is not attached to the relative value of the additions made at different ages. If an Extra Premium is represented by, say ten or any other number of years to an old life, the same addition is by no means equal, when a much

younger life is being assured, and *vice versa*; of course we are assuming that the circumstances of both lives are precisely the same in the opinion of the Medical officer.

In illustration of this, take the case of an addition of 10 years to lives of the undermentioned ages:—

	Age.	Annual Premium to assure £100, at advanced age.
21 + 10 years to actual age, equal	31	£2 8 2*
31 + 10 do. do. „	41	3 5 2
41 + 10 do. do. „	51	4 14 6
51 + 10 do. do. „	61	7 6 4
61 + 10 do. do. „	71	12 1 8

Provided the circumstances necessitating an addition of 10 years to be the same at each of the above ages, an equal or relative benefit will be obtained by an Office, if additions to the respective ages be made as under:—

	Age.	Annual Premium at advanced age.
21 + 10 years to actual age, equal	31	£2 8 2
31 + 8 do. do. „	39	3 1 5
41 + 7 do. do. „	48	4 3 2
51 + 5 do. do. „	56	5 15 6
61 + 4 do. do. „	65	8 16 6

After making this correction we find a difference—

At age 31, as compared with age 21, of 2 years charged in excess.

41,	„	„	„	3	„	„	„
51,	„	„	„	5	„	„	„
61,	„	„	„	6	„	„	„

And causing a difference in the Annual Premium, at age—

31 of	£0 3 9	per cent. per annum.
41 „	0 11 4	„ „
51 „	1 10 10	„ „
61 „	3 5 2	„ „

Owing to circumstances such as we have detailed, and which are inseparable from the plan pursued, we think it will be admitted, that there is no rule to guide, nor system by which to act, in assessing extra premiums.

Our Second enquiry is,—*Are Diseased Lives assured on equitable terms under the plan in operation?* The liability to error in assessing an equitable extra premium has so far been made apparent. The want of system is bad enough, and may produce errors in favour of or against the party assuring. But we now proceed to show, that though the business done

* London and Yorkshire Assurance Company's Rates of Premium, with Profits.

in the assurance of Diseased and Invalid Lives is practically safe in the aggregate to a Company, it is in its operation iniquitable to individual Assurers.

Let us suppose the case of a person making a proposal for Assurance to be affected with Heart disease, Chest affection, or Liver complaint. The measure of damage done to a life afflicted with either of these or similar diseases is relatively different according,

1st.—To the age of the person.

2nd.—Whether or not his parents or near relatives have been similarly afflicted and died from the disease.

3rd.—According as the individual's constitution is strong or feeble.

4th.—The result is likewise affected by the number and frequency of the attacks.

Now, individuals will present themselves for assurance with a particular disease common to each, but relatively affected, that is, the damage done will be different in each case, according as effects are likely to be produced by the circumstances we have alluded to. In proportion as they are more or less developed will there be greater or less risk. It strikes us as being impossible for anyone to gauge or discriminate accurately the different degrees of disease, and tendency to disease, which exist in such great variety in different individuals afflicted with the same complaint. The utmost a Medical man can do, we think, is to seek a conclusion, from his past experience and observation, of the effect produced on persons similarly afflicted. But in applying it to the particular case before him, his estimate may turn out to be either right or wrong. The experience of any one man can be but limited, but it must of necessity be meagre indeed when he has to apply it to so many different kinds of disease and different stages of the same disease. The difficulty of dealing with such an experience, however, granting it to be sufficiently extensive, becomes in practice unavailable; for to be servicable it should be tabulated, and reduced to numbers. The result of this state of things, therefore, is, as we have already indicated, on the business transacted in the aggregate on Diseased and Invalid Lives the Offices have succeeded in keeping themselves safe; but this has been accomplished by pursuing a system that permits those who ought to pay the most to get off with the least possible payment, and those who ought to pay little are compelled to make good, in virtue of their ultimate better health, the shortcomings of those who died early, from a disease for which they ought to have paid much more than they did. This is a result inseparable from the present system, and is manifestly unfair to the individual assured.

Our Third enquiry is,—*Does the system secure a uniform charge by different Companies for extra risk?* From what we have already shewn, the reader will be prepared to learn that in the majority of cases where extra premiums are required, the rate at which one Office will accept a life will seldom be taken by any two Offices on the same terms. This

fact confirms the arguments we have already put forth, and is therefore an additional proof of what we have stated, as to the want of system as well as the inequitable method on which the extra premiums we have been considering are assessed. The various estimates that different Companies entertain of particular lives is the result of diversity of opinion among Medical men with reference to a given case on which they have all the same means of judging. If it be granted that one Medical authority can measure accurately the number of years on an average by which the expectation of a given life will be diminished, on what hypothesis can we presume to say that another Medical authority shall agree with him in assessing the damage done to the life at the same rate? Only on this assumption, viz., that their experience has been identical, that their deductions from that experience harmonize, that their judgments coincide, and are not biased by any of the causes we have referred to; that, in short, their views and feelings, as well as their tempers and temperaments, run parallel; these are conditions which we know are not to be found in any two individuals. Numerous cases are daily occurring in which this difference of opinion is taking place, and consequently retarding the progress of Life Assurance. We might instance innumerable cases where persons having proposed for Assurance to one Office have been declined, and simultaneously accepted by another at the ordinary rates of premium. The more general result, however, of a declination is, that the life cannot subsequently be assured at all, or that the person will not again offer himself for examination, so chagrined is he at his first refusal. But what is of equally frequent occurrence in the practice of Life Assurance is, that those who are accepted with a small extra premium in one Office, find when they apply to another that they have to pay a higher or it may be a lower premium; and if they apply to a third or fourth Office, in each case they would most probably receive different quotations. We have frequently known and heard of cases in which a Company has refused to accept a life without an addition of 10 years to the proposer's age, while the result of the same person's application to other Companies has been acceptance either at the ordinary rates, or with 3, 5, or 7 years addition. A case that came under the writer's notice lately is by no means an uncommon one. The life had to be assured for a large amount, and it came before most of the Offices, but so different were the opinions entertained as to the eligibility of the life, that the greatest difficulty was experienced in getting the life re-assured. The rates required by Offices willing to accept the case were represented by additions varying from 3 to 20 years.

From these and many other similar instances that might be adduced, it will be seen that there is scarcely any uniformity in the charges made by different Companies for Assuring Lives that are not first-class or which we have characterised as doubtful; and farther, that it is impossible by the present system to attain to uniformity.

CHAPTER III.

THE NEW SYSTEM PROPOSED FOR THE ASSURANCE OF DISEASED AND DOUBTFUL LIVES.

WE have already seen that the extra premiums charged for the Assurance of Diseased and Invalid Lives are assured without reference to system, and on principles arbitrary and hypothetical. A plan that would remedy the errors and inequalities of the method referred to in the preceding chapter, need only deal with the interests of those who are required to pay extra premiums. For it has been already stated that on the business transacted in the aggregate, the extra premiums charged have been sufficient, over a series of years, to protect Companies transacting that description of business. If then we can show that the rate of premium charged at the time the Policy is taken out may subsequently be more equitably adjusted, the grounds of complaint against the present method, if not wholly removed, would be greatly mitigated.

A plan that would make it absolutely certain that a single extra premium would be paid in the event of death occurring before a given age, and a plan that would make it also certain that the single extra premium would be cancelled in the event of surviving a given age, would evidently be a great desideratum. Such a scheme we shall presently show would be decidedly more equitable to individual assurers.

To show how such a method can be carried out, let us suppose a number of individuals desirous of forming themselves into a Society for the purpose of assuring their lives. Preparatory to their becoming members, they of course agree that each will submit to a Medical examination. The results of the examination are, that three-fourths of the intending members are passed as first-class lives, and the remaining fourth are rejected as being Diseased or Doubtful Lives. But, that they may not be excluded from the benefits of Life Assurance, the Society compound

with them, and submit the following New Scheme. *The ordinary tabular rate, at the proposer's actual age, will be adhered to, and, instead of the usual Annual Extra Premium, payable during the whole of life, a single Premium shall be made a temporary charge on the Policies of those Applicants for Assurance who are considered by the Medical Advisers below the average standard of health. The single Premium guaranteed to the Company shall only be deducted from the sum assured, in the event of the Policy becoming a claim within a limited number of years, agreed on between the Office and the assured.*

We now proceed to explain the principle of the New Scheme. What are its characteristic and peculiar features.

First.—*The ordinary Tabular rate at the Proposer's actual age is adhered to.* It is in this fact that the ultimate benefit to the Assured, under the New Scheme, consists. The arguments in the last chapter proved, we think, conclusively, that the recommendation of a Medical Adviser as to the correct number of years which should be added to the age of a life considered Diseased or Doubtful, was little better than a guess, and in many cases, as the result proves, wide of the mark. Instead, therefore, of pre-judging, judgment is suspended. And that which is a matter of doubt and uncertainty is left an open question, to be decided by the natural verdict.

Second.—*There is no Annual Extra Premium to be paid during the whole of life as under the Old System.* Why should an Annual Extra Premium be paid in anticipation of a risk which is uncertain and undefined, when the Company have the power of subsequently retaining such an amount of Extra Premium as may be found to be Just and Equitable? If the risk which an Office incurs by Assuring a Diseased or Doubtful Life, is paid for by an Annual Extra Premium, the Office is protected, but the Assured is not permitted to share in any benefit that may accrue from the fact of an error in judgment having been committed by the Medical Advisers, in estimating the Extra Risk which was supposed to be incurred. Annual Extra Premiums are therefore abolished under the New System, and the Assured pays from the time his proposal is accepted at the same rate as the First-class Life does.

Third.—*A Single Premium is Guaranteed to the Company.*

We have now to explain the nature of the compensation which is to be accepted by the Company in lieu of the Annual Extra Premiums hitherto charged. The single premium which is guaranteed to the Company represents the present value of the contingent number of years recommended to be added by the Medical Adviser. If this single premium was paid down in cash to the Company, it would represent the value of an Annual Extra Premium under the Old System. That is, an Annual Extra Premium would be worth as much to the Company as the Single Premium paid down. But under the New Scheme the Single Premium

is not paid down in cash, it is, on the contrary, left in the hands of the Assured, and claimed by the Company only in the event of their Medical Advisers' suspicions regarding the life proving correct. Protection is by this means afforded to the Company without necessitating a money payment on the part of the Assured.

The following Table exhibits the Temporary Guaranteed Single Premium required at the several ages indicated, when the undermentioned additions have been recommended by the Medical Advisers :—

Actual age of the Assured.	When 3 years have been recommended to be added to the age of the Assured.	When 5 years have been recommended to be added to the age of the Assured.	When 7 years have been recommended to be added to the age of the Assured.	When 10 years have been recommended to be added to the age of the Assured.
20	£8 4 3	£15 7 2	£18 3 6	£24 13 7
30	9 7 10	14 19 9	19 19 11	26 8 10
40	9 12 7	15 1 2	19 15 3	25 12 2
50	9 7 6	14 10 3	18 17 10	23 19 1
60	8 13 4	13 0 2	16 10 4	20 11 7

Fourth.—*The Single Premium is Guaranteed to the Company for a limited number of years only.* The period during which the Guarantee to the Company will remain in force will vary with the age of the Assured and the premium to be paid. When the age is the same as in the above Examples, then the following Table will indicate the number of years during which the Guarantee will remain in force, and likewise the age which, when attained by the Assured, will cancel the Guarantee :—

Actual age of the Assured.	Number of years during which Single Premium is guaranteed to the Company.	Age of the Assured when the Policy becomes free from deduction.
20	32	52
30	27	57
40	23	63
50	18	68
60	12	72

The method adopted under the New System is an expedient for adjusting and re-arranging the extra Premiums, so that they may subsequently be levied more equitably, and borne by those who are more justly liable for their payment. The object has been to correct the errors of the original assessment of the extra premium as regards individual interests. This, we think, is obtained by requiring that the full value of the extra premium originally charged shall be paid by those whose Policies become early claims, in order that those who have turned out better lives than was anticipated, shall be wholly exempt from the payment of any additional premium.

CHAPTER IV.

THE ADVANTAGES OF THE NEW SYSTEM OF ASSURING DISEASED AND DOUBTFUL LIVES, CONTRASTED WITH THE METHOD HITHERTO ADOPTED.

Preparatory to detailing the Special advantages to Policy-holders, it may be well to observe that the New Scheme will have an important bearing with reference to the Extension of Life Assurance. It has been justly observed, by Mr. Scratchley, "the number of Assurable Lives is greatly contracted, and many persons who in the long run do not die before their time, are debarred from the benefits of Life Assurance. . . . We urge therefore that the field of Assurance should no longer be limited; that inasmuch as Life Assurance is merely the result of judicious money measurement of the contingencies of human existence, the system may safely be extended. . . . If this were done, we should cease to meet with aged persons who tell us of their having been declined by such an Office when young." The Scheme we have been illustrating will in an especial manner meet such cases as are here alluded to. Those who take out Policies at an increased rate of premium have generally great confidence in their own lives; they believe, notwithstanding their tendency to some disease, that the precautions they adopt, and the regular lives they lead, will go far not only to delay the development of active disease, but procure for them the enjoyment of a "green old age." Those, therefore, who are liable for Extra Premiums under the New Scheme are offered a Premium for leading careful *sober lives*. The endeavour to prolong life, however, is just taken at what it is worth. This, notwithstanding, is a fact of importance to those who have to pay an extra price for their Assurance, on account not of any organic disease, but solely

of the certain consequences of a recurrence to irregular habits, and against that contingency an Assurance Society can have no guarantee. To such the New Scheme presents the inducement of a money consideration, for they will have a greater chance of leaving more money at their death, if by a steady sober life they outwit the doctor's anticipations, and enjoy their average Expectation of Life.

Another feature of the Scheme, and one which we think will materially promote the extension of Life Assurance, arises from the fact of there being no payment demanded for extra premiums during the lifetime of the assured. When lives of the class we are referring to cannot under any circumstances obtain a Policy without an Annual extra payment, the fact of being able to obtain a Policy at ordinary rates, although subject to a Reversionary Charge for the extra premiums, is in itself a matter of great convenience, and an important accommodation. Cases are constantly occurring where proposals are not completed from the fact of the extra premium being so high as to render the payment beyond the resources of an intending assurer, or if not beyond his means, further than his inclination will yield or his sense of justice submit to, when without any prospect of ultimate relief. Of course we do not pretend to say that a deferred payment which has its equivalent present value is any advantage; we have been referring simply to a matter of convenient arrangement.

It may not be out of place to observe that another practical advantage can be obtained from the New Scheme in connexion with the allocation of profits. For the ascertained Share to be appropriated to a Policy-holder could be legitimately applied in liquidation of the amount to be deducted in case of death before the age agreed on. At present, Bonuses are allocated by Assurance Companies in augmentation of the sum assured, irrespective of the state of health the Policy-holder may be enjoying at the time the Bonus is declared. So that the method we have suggested would be only in accordance with the system at present pursued. This, however, is a matter for the consideration of Offices, and we merely suggest this method of apportioning profits as one that may be safely adopted under certain restrictions.

Our final enquiry resolves itself into an Examination of the peculiar and special advantage to the Policy-holder under the New Scheme. In what does it consist? Viz.: In this, that he is afforded an opportunity of being ultimately exempted from the payment of extra premiums in any shape whatever, either annually or by

deduction from his Policy. Instead of arbitrarily deciding the point at the time the Policy is taken out, and making the assured liable for the payment of an Annual Extra Premium during the whole of life, the New System provides that the life shall first be proved, and the correctness of the medical estimate put to the test; and the Extra Premiums charged or remitted according as the assured shall turn out as it is commonly called a good or a bad life. The advantage which the assured enjoys under the new system is made clearly apparent on the accompanying diagram, and which is thus illustrated. The curve line C D represents the expectation of life at the respective ages at the foot of the diagram, and the line B E represents the times in which Policies are paid up by investing the premiums at 4 per cent. compound interest. By the old system the extra premiums are paid during the whole of life represented by the lines A C, m o, p r, s u, v x, &c., whereas, by the proposed New System, as soon as the ages indicated by the lines A B, m n, p q, s t, v w, &c. are attained, the deductions for extra premiums are cancelled and the original amount of such Policies paid in full. Referring again to the diagram, the total extra premiums charged to members are paid by those who die within the space coloured yellow. The extra premiums, in the shape of a corresponding deduction from the sum assured, are, so to speak, compressed within the yellow space, to the relief and total exemption from extra premium of those who survive the ages indicated by the line B E on the space coloured purple. By the old method the very opposite results flow from the practice pursued, for a certain annual extra premium is demanded, and has to be paid all through life, irrespective of improved health and ultimate long life. The effect of this is, that the error committed at the beginning of the contract is continued to the end of life. The assured has no remedy for this, and can have none, for the Company require the extra premiums which were agreed to be paid to the limit of life, in consideration of the small amount of extra premiums received from those who died at an early age. It is in fact assumed that the errors will balance each other as regards the Company; and if too little has been received from those whose Policies become early claims, their deficiency will be made up by those who turn out good lives and live long. But it may be asked, why fix on the time when a Policy becomes paid up with Interest to remit the amount representing the extra premiums? In reply to that we admit that, as regards Life Assurance in the abstract, there is no importance to be attached to the time when Policies become paid

up farther than this, that every Society assuring lives must receive, in the shape of nett premiums to be accumulated at compound interest, such a sum as will equal the total amount they have assured. Now, the expectation of life exhibited on the diagram, represents the average age attained by persons assuring at all ages. If, therefore, a Society assured lives from the date of birth to the extreme limit of life, the premiums paid for the respective assurances would, when invested at a given rate per cent., just amount to the sums assured in the same number of years as represented by the line shewing the Expectation of Life. As three per cent. is the rate at which premiums are usually assumed to be invested so as to produce the sums assured, the Expectation and paid-up curve lines on our diagram would, in that case, be nearly coincident, and there would be no material advantage to the assured under the new scheme such as we have described. But we have assumed the gross premiums to be accumulated at *four* per cent. instead of three per cent., and hence the difference between the times in which Policies are paid up and the Expectation of Life, for of course a higher rate of interest and a larger Premium will produce the amount assured in a shorter time. The difference between the age attained when the Policy becomes paid up and the age as shewn by the Expectation of Life, is the remainder of existence to be enjoyed on an average by persons of a given age, assuming the gross premiums accumulated at four per cent. But the lives that survive to the time when their Policies amount to the sum assured when gross premiums are invested at four per cent., on the average nearly survive the Expectation Curve, when nett premiums are invested at three per cent. It follows, therefore, that no concession or advantage is given until the full Expectation of Life has been reached. But it may be asked, why make any concession even then? "The very intention of a Life Assurance Society is to provide a Sum for the heirs of those who die soon, out of the contributions of those who are fortunate enough to live long."* Perfectly true—on the assumption that all the members of a Society are, when admitted, Select Lives, and unexceptionably healthy. The case, however, is altogether different when we come to admit Diseased and Doubtful Lives. In such cases, as we have already shewn, the greatest discrepancy exists in the medical opinions entertained regarding the value of such lives. We leave the fairness of the foregoing scheme to

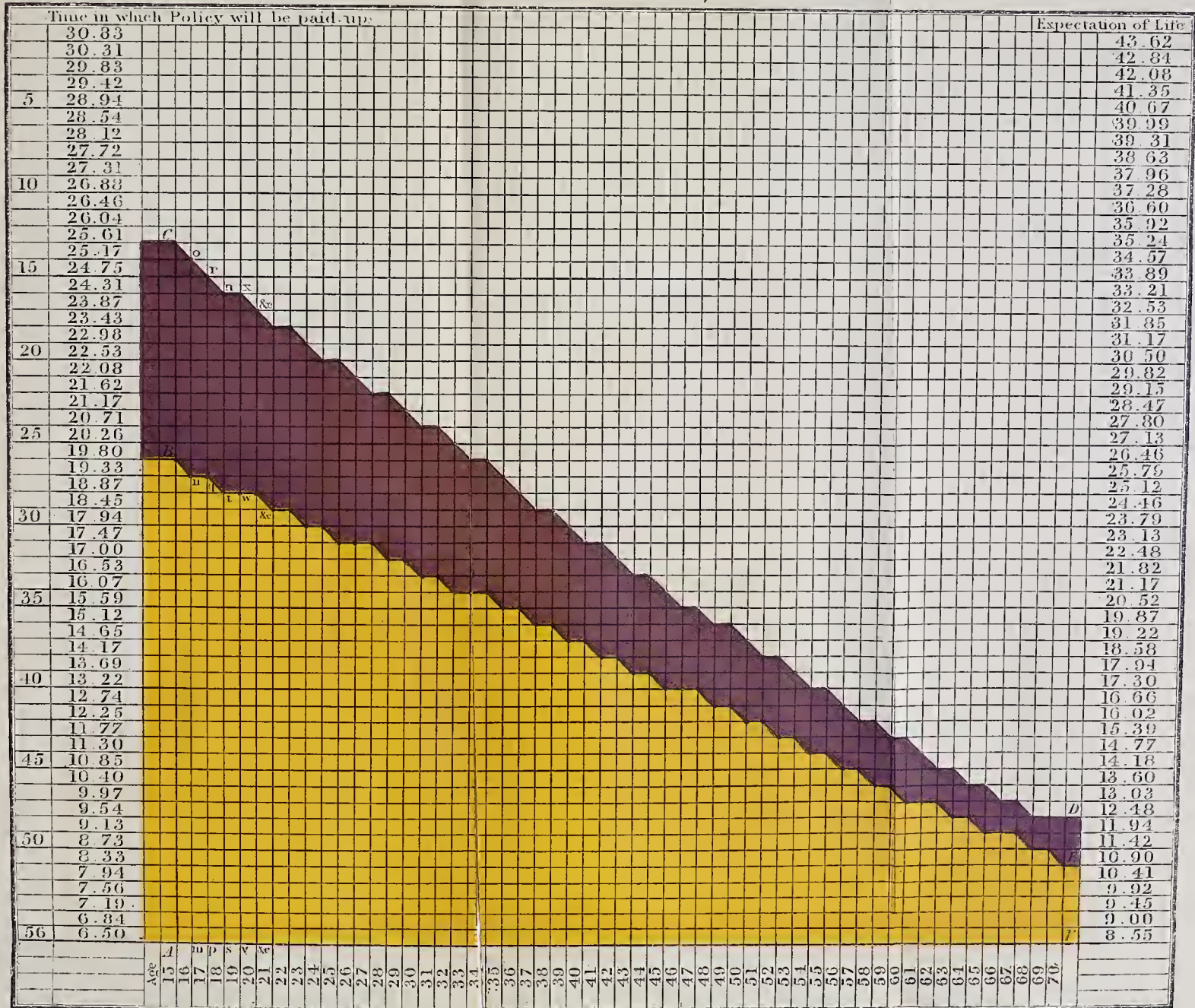
* Sang,—“Essays on Life Assurance,” No. 3, page 24.

be decided by those who have to pay extra premiums. Their case may be summed up thus. Suppose the annual extra premiums payable through life to be commuted into a sum to be deducted in each case from the Policy at death, this plan would represent the old method. But under the new system the members are made aware, that the deductions from the Policies of those who die within the time when the Policies become paid up, will, in each case, be more than if they were all to be made liable for the deduction of the extra premiums with which each was originally charged. But the members think it a more equitable arrangement that those who die, probably from the disease for which they were first charged an extra premium, should be made liable for the full amount of such extra premiums; and that those members who have turned out better lives than was anticipated, who, in fact, have lived to pay premiums to the full expectation of life, should be altogether exempted, for it may fairly be assumed they were originally assessed in error.

EXPLANATION.—In the annexed Diagram, the Curve C o r u x &c., D represents the Expectation of Life at the respective ages at the foot of the Diagram, and the Curve B n q t w &c. E represents the times in which Policies will be paid up by investing the gross Annual Premiums, at all ages between 15 and 70, at 4 per cent. compound interest. If the Assured survive the paid-up Curve B n, q t w &c., he is assured for the remainder of life, at the ordinary Premium, and the amount assured is paid in full when the Policy becomes a claim. But if the Assured does not survive the paid-up curve, then he is subject to a deduction from his Policy in proportion to the increased age at which he was accepted. By the Old System the Assured pays the increased rate of Premium during the whole of Life, represented by the lines A C, m o, p r, s u, v x, &c. Whereas, by the proposed New System, he pays it up to the period in which the Policy is paid up, represented by the lines A B, m n, p q, s t, v w, &c. Hence the difference between these lines or periods is the actual gain to those whose duration of Life is such that they survive the period indicated by the Curve B E. For Example :—at age 20, the line v x denotes the time the Assured has to pay the increased rate of Premium by the Old System, and v w the time he has to pay it under the New System. The difference between these lines, viz., w x, represents the gain to the Assured in this particular case. Also the area of the whole figure A C D F represents the entire Premiums paid by all the Assured under the Old System, and the area of the figure A B E F the same amount of Premiums paid under the New System. Therefore the difference between the areas of these two figures, represented by the purple space B C D E, clearly represents the total gain to those Policy-holders who live to pay Premiums amounting with interest to the sums assured under the New System, for all ages between the limits of 15 and 70.

NOTE.—The paid up Curve B E in the annexed Diagram is computed on the supposition that the gross Premiums for the assurance of a stipulated sum are accumulated at 4 per cent. compound interest. Of course, if the Premiums are invested at a higher or lower rate of interest than we have assumed, the Curve will rise or fall in proportion.

DIAGRAM IN ILLUSTRATION OF THE SCHEME FOR THE ASSURANCE OF *Diseased and Doubtful Lives.*





OBSERVATIONS ON THE CHARACTERISTICS OF ASSURABLE AND NON-ASSURABLE LIVES.

BY DR. A. P. STEWART.

The ancient definition of a healthy man, one who has "a sound mind in a sound body," is suggestive as embracing the two great elements which are essential to perfect health, but requires much explanation and expansion before it can be made available for the purposes of Life Assurance. Most people can readily detect symptoms of unsoundness of mind, especially if they exist in those with whom they are on familiar terms. These symptoms seldom fail to attract notice, whatever be the precise form they assume, from those oddities and eccentricities of character which are so frequent a source of merriment, to those sudden and extreme fluctuations of spirits, or those deceitful lulls followed, without apparent cause, by tempestuous outbreaks, which give painful evidence of a mind so ill-balanced, that any extraordinary excitement may upset it at once and for ever. But while mental peculiarities so commonly betray themselves on the surface, in regard to bodily health the judgment, even of intimate friends and relations, is very often at fault. So deceptive are appearances, that the medical man requires constantly to bear in mind the caution, "Judge not according to the appearance, but judge righteous judgment." In many instances, that which is so completely hid from the eye of intimate friends, and is detected by the practised medical observer only after painstaking enquiry, is very far from the thoughts of the person himself, who, if he ought to be a *patient*, cannot, in the ordinary acceptation of the term, be called a *sufferer*. Hence the mingled surprise and indignation with which a man, who looks and feels in perfect health, receives the intimation that his life, if assurable, is so only at a considerably increased premium. What, then, are the characteristics of a *model* life?

I.—Speaking generally, and with reference to what may be gathered by a rapid glance, his looks should correspond with the age stated, his limbs and body should be plump, but firm and muscular, and free from palpable traces of injury or deformity, his figure should be erect, well-formed and well-proportioned, his gait steady and easy, his step elastic, his eye bright, his complexion clear and fresh—neither pale nor highly florid, above all, neither sallow nor subject to deep and sudden flushings.

To come to particulars. The head, which must not be prematurely bald or grey, may be conspicuously large, but if it surmounts a neck of considerable length, a pair of broad shoulders and a capacious and well-arched chest, if, in short, whatever be its size, it does not strike the eye as out of proportion to the neck and chest; if headaches, giddiness, and weight in the head are unknown; if tobacco-smoking is seldom practised, or not at all; if the passions and animal nature are thoroughly under control, if the mind is calm and evenly balanced; if the waking hours are spent in a judicious alternation of work and recreation, of mental and physical exertion without undue fatigue; and if the sleep taken be moderate in quantity, and in quality sound and refreshing; the probabilities of any disease of the mind, brain, or spinal cord seem reduced to a minimum.

But further, our model life must be free from scars of any kind, especially those of a scrofulous character; he must be a stranger to sore throats and affections of the windpipe; his voice must be free from hoarseness, his breathing must be tranquil and uniform; within his capacious and symmetrical chest, which sounds everywhere clear when struck with the finger, and expands equably in every part, the softness of the inspiration, and the absence of any expiratory sound, shew how readily the air tubes and elastic lungs admit, and, by their instant collapse, expel the air. The dulness, which indicates the position of the heart, must not occupy a space notably greater or less than the palm; the pulsations of the heart and the pulse at the wrist must be regular, equable, and of moderate strength and frequency, not excited by slight emotions or bodily exertion into rapid and tumultuous action; palpitations and faintishness are known only by name, as are also hæmorrhoids and varicose veins; and the circulation, as indicated by a comfortable warmth of the skin, is at all times vigorously maintained, even in the remotest corners of the body. In other words, except when at rest in bitter weather, cold hands and feet should never be felt.

As regards nutrition; the best account you can give of any one is that, to use a common phrase, "he does not know he has a stomach." So, instead of describing a perfect digestion by the absence of symptoms, to which the healthy man attaches no meaning, it will be more to the purpose to give some hints for the preservation of that immunity which some enjoy from the miseries of indigestion. The meals, then, should be light and moderate in quantity, according to the well known maxim, "Always leave off with an appetite;" should not be more than four or five hours apart; should not be hastened or broken in upon by the calls of business, and should be *eaten*, as becomes human beings, not *bolted*, as is the fashion among the inmates of a wild-beast show. In other words, the teeth must be made to do their own work of chewing the food, instead of leaving it to the stomach, which, if compelled to attempt it, will soon strike work altogether. Our model man, then, will not at any time bolt his food, or indulge in heavy suppers just before retiring to rest, nor will he wash down his meals, by way of promoting digestion or of procuring sound sleep, with an extra allowance of port, sherry, stout, or bitter beer. If these simple hints be attended to, he will find that the whole process of digestion, from the act of swallowing the food to the daily expulsion of the refuse from the system by the proper channels, will go on with the most perfect smoothness and regularity. But, if not, we need only say, *he will very soon cease to be a model life.*

Lastly, he will pay special attention to the state of the skin. The daily use of the cold bath and frictions, by those who have sufficient power of circulation to bring about subsequent reaction and a healthy glow of the surface, is perhaps the most effectual preventive of catarrhs, influenzas, rheumatism, and affections of the kidneys. The Turkish Bath is, in very many cases, destructive both of comfort and health, and should not be used, by any who have not had previous experience of its effects, without a medical opinion.

If this be a sketch of your model life, many will be apt to exclaim, who can expect to be placed in the first class? Few indeed, if this standard were rigorously adhered to by Life Offices. Not more, perhaps, than one in a hundred approaches it; not one in a thousand probably comes up to it. We are compelled, therefore, to make considerable allowances for what are called "deviations within the limits of health." Thus, those who live in towns are naturally much paler than those who live in the country; many a

spare man is wiry and muscular, very active, and capable of enduring much and long-continued fatigue; not a few are round-shouldered, stoop considerably, and have narrow chests, some are even pigeon-breasted, and the breath-sounds consequently deviate a little from the healthy condition; but the general health may be excellent and continue so throughout a long and busy life. The labour, both mental and bodily, undergone by the proposer, may often be excessive and protracted, and the periods of relaxation shorter than we could wish to see them, yet, as manifold experience proves, be sufficient to maintain good, and even unbroken health to a good old age. A man may have occasional headaches, colds, and influenzas; he may have a pulse five or ten beats above the average of seventy; he may even have experienced, in certain states of the atmosphere or of his own digestive apparatus, some transient oppression of the chest, and tendency to palpitation; he may, at rare intervals, notwithstanding habitual moderation in eating and drinking, be troubled with acidity and flatulence; may be slightly bilious, or have an attack of diarrhœa; and yet, for all that, be a first-class life. If in childhood, or at some remote period, from some extraordinary cause, and not from family predisposition, he has had a pleurisy or inflammation of the lungs, which has left no trace behind it, and has shewn no disposition to recur, even this will not prevent his life being assured at ordinary rates, if his habits and other circumstances, of which we shall presently speak, interpose no obstacle. From these examples, which might, if necessary, be greatly multiplied, it will be evident that the allowances made for deviations from the strict standard of health are not only ample, but very liberal.

We hope we have made pretty clear what is meant by a *good assurable life*. We may briefly define it to be one which, considering the family history, the mode and conditions of life, and the general soundness of all the organs and vital functions, gives promise of long duration.

II.—We must next enquire, *What is a doubtful life?*

Let us take an extreme case. A man between 25 and 30 years of age presents himself for examination. He exhibits all the characteristics we have enumerated above, of perfect health in its highest development. His habits are regular, his occupation and residence highly conducive to health, and every organ is in perfect working order. Here, if present condition were a guarantee of continued immunity from any of "the ills that flesh is heir to," is a life which no office would for a moment hesitate to accept. But

there are various circumstances which may cast a shade of doubt, more or less deep, even on a life at first sight so eligible. We must enquire—

1.—What is his family history? If his parents, though each of a long-lived race, have died early, already a suspicion of some family taint dawns upon one. If, in addition, we find that one, two, three, the majority, perhaps almost all of his brothers and sisters have died, suspicion strengthens into certainty. If, still further, it appears that these died, not in infancy, but at various ages between 10 and 35, but especially between 15 and 30, we may almost conclude, without further enquiry, that the disease which has wrought such havoc is tubercular consumption. In estimating the bearing of such facts in family history on the probabilities of life, we may inflict wrong on a proposer by viewing too seriously the occurrence of a single case of consumption in a family of average size. This has been well pointed out by Dr. Brinton in his admirable lecture “On the Medical Selection of Lives for Assurance.”* But when two, three, or more cases have ended fatally in a family of seven, eight, or ten, the survivors not having attained the age of 35, the probability is that in some of these the seeds of the disease exist, and may be quickened into activity by apparently trifling exciting causes. The same remarks apply to other diseases reputed “hereditary,” such as scrofula, gout and rheumatism, cancer, insanity, and diseases of the brain and nervous system—with this important difference, however, that whereas tubercular disease occurs comparatively seldom after 35, advancing years confer no immunity from most of the other diseases named; on the contrary, it is after 40 that gout, cancer, and paralysis, most commonly occur. Now here is an extensive group of circumstances, which, without any present indication of disease in the life under examination, at once places it in the category of *doubtful* or *suspected* lives; and the presumption against its eligibility varies, according to the prevalence of the complaint among blood relations, from next to nothing to an almost absolute bar. The extra risk will be covered in one case by the addition of two or three years; in another, the addition of twenty or thirty years will hardly tempt a prudent office to incur it. We need scarcely add that the frequent occurrence of slight colds in a member of a consumptive family; of pains in the limbs and joints in a person with a gouty or rheumatic predisposition; of great and sudden fluc-

* Third Edition, pp. 25, 26. It was Dr. Boggie, of Edinburgh, who first recommended the rejection of lives belonging to families in which more than one case of consumption had occurred—a principle which is also strongly advocated by Dr. Christison.

tuations of spirits in one, several of whose near relations have been afflicted with insanity; or of headaches, with full pulse and flushed countenance, in one among whose relations several apoplectic and paralytic seizures have occurred, will naturally decide against the proposer any leanings the medical examiner might previously have had in his favour.

Still the actual result not unfrequently belies these suspicions, in virtue of which an addition of seven, ten, or fifteen years has been made to what turns out to be a long and singularly healthy life. The frequent occurrence of such cases has often suggested to thoughtful men the question, whether some plan could not be devised whereby justice would be done to the assured without injustice to the assurer? By the plan now proposed, this question seems at length answered in the affirmative.

2.—*Occupation* may materially lessen the value of life. All very sedentary occupations are unhealthy. From time immemorial, the hard student, whose bookish tastes lead him to forego that bodily exercise which is essential to health, has been known as the victim of indigestion in its most aggravated forms. Some few, naturally indolent, whose appetite is not impaired by want of air and exercise, become very corpulent, and are peculiarly liable, in consequence of their incessant mental efforts, to apoplexy, to congestion, and even to softening of the brain. The like dangers threaten all who, in the pursuit of wealth, distinction, or power, in managing the anxious details of a complicated business, harassed by the ceaseless calls of laborious professions, or burdened by the cares of public office, deny themselves that relaxation, without which the most herculean frame must sooner or later give way. The clergyman, in the exercise of his sacred calling, is peculiarly exposed to sore throat and the development of pulmonary disease; the medical man to various contagious influences in tending the sick; the clerk who is chained to his desk in a stifling atmosphere for ten or twelve hours a-day, and the young assistants in large houses of business, where perhaps twenty minutes is the utmost that can be spared for any meal, to extreme indigestion, and its frequent consequence, fatal consumption. Then, among the industrial classes, though comparatively few of them seek to assure their lives, every medical man knows well how proverbial is the indigestion of shoemakers and tailors; how short-lived, owing to night-work, want of sufficient rest, and constant exposure to rapid alternations of temperature, are journeymen bakers; how prone to incurable affections of the lungs are workers in flax and cotton mills, Sheffield grinders, workers in plaster of Paris, stone-masons, colliers, and other miners, these last incurring additional

risk from the frequency of explosions; how surely a very large proportion of painters are affected, sooner or later, with lead colics rheumatism, or palsy; how not a few enamellers and paper-stainers, who work with Scheele's green and other virulent poisons, and silverers of mirrors, who are constantly handling quicksilver, become more or less injuriously affected thereby; and finally, how the manufacture of lucifer matches has generated a new and frightful form of disease. Need we say more to prove how important a bearing occupation has upon the assurability of lives?

3.—A few words on the subject of *residence*. So familiar to everybody is the unwholesomeness to European constitutions of tropical climates, that Assurance Offices have special and greatly increased rates for persons going to the west coast of Africa, to the West Indies, to British Guiana and South America, to India and to China. But many parts, even of temperate and of European countries, are notoriously unhealthy. It would require a large extra premium to cover the risk of a constant residence at Rome; within a few miles of the Pontine Marshes, or near the Tuscan Maremma; at Mantua, or in many other parts of the Lombardo-Venetian territory. There are large regions in the south-west of France, in Portugal, in Spain, in Holland, in Ireland, in England itself, (*e. g.*, in parts of Kent, Essex, Cambridge, Lincoln, Bedford, &c.) where residence implies almost certain liability to ague. There are extensive districts in the west, south-west, and north of England, and in the north of Scotland, where owing to the criminal neglect of vaccination, and the frequent and destructive outbreaks of small-pox, life is very insecure. There are also many places in the country—most villages, and not a few towns of large size—where, owing either to the entire absence, or the great deficiency, of drainage, and the consequent accumulation of nuisances, the death-rate is greatly increased by the frequent occurrence of severe and fatal epidemics. It would be but simple justice to make a proportional addition to the lives of proposers who reside in localities where the Registrar-General's tables show a death-rate constantly and notably above the average. If, for instance, diphtheria, scarlatina, small-pox, or typhus, were proved to be habitually more common and fatal in some localities than in others, offices would either decline accepting the risk of assuring inhabitants of such infected districts, or would do so only at a large extra premium. Some such arrangement, if feasible and generally adopted, might tend to quicken the march of sanitary improvement where now it lags behind.

Having thus reviewed the chief *external* circumstances, which may render an apparently first-class life ineligible for assurance,

we must say a few words on circumstances *peculiar* to the individual, which may materially impair the value of life.

4.—*Conformation* of body. Deformities of various kinds, which cannot properly be termed or considered diseases, may yet influence more or less the decision of the medical referee. A curvature of the spine, so slight that it scarcely affects the figure, and so thoroughly stationary for many years that there is no prospect of its ever increasing, is significant merely as indicating a naturally weak constitution. So, also, extreme corpulence is clearly indicative of a want of proper assimilative power, the deposition of fat being a low and unhealthy form of nutrition. The joints and limbs may present unmistakeable traces of a ricketty childhood, and a man may be so bow-legged or knock-kneed as to be incapacitated from taking that amount of exercise which is essential to vigorous health. The chest may be so flat, so narrow, or so pigeon-shaped, as greatly to interfere with the free expansion of the lungs and the movements of the heart, thus predisposing to disease of both organs. The head may be large, out of all proportion to the rest of the body, and so suggest the probability of congestion, or other affection of the brain; and, in direct proportion to the shortness and thickness of the neck, will be the risk of sudden and fatal apoplectic seizures. If, in addition to this naturally unfavourable confirmation,—

5.—His *habits* and mode of living are irregular, the risk becomes so great that no increased premium will cover it. The same may be said of all who indulge to excess in stimulants of any kind. To them the penalty comes so surely, and often so swiftly, in the shape of incurable disease of the liver or kidneys, or of delirium tremens, epilepsy, or softening of the brain, that avowed and confirmed tipplers are by common consent rejected. It is sometimes a difficult question, whether to accept at a largely increased premium, or to decline one who occasionally transgresses; or one who, having been intemperate, has for some time led a sober and steady life; or public-house keepers who are continually exposed to temptation, and sometimes yield to it. But still more difficult is it, owing to the want of thoroughly reliable information, to say what course shall be followed in reference to men not generally reckoned intemperate, though they habitually indulge in the pleasures of the table. They eat largely—in regard to some it would be more proper to say gluttonously—and they drink in proportion, in order to quell the tumult that would otherwise ensue. Thus they are doubly intemperate, and yet by a pleasant fiction they escape, under the title of *bon vivants*, the character which they earn every day of their lives, of “gluttonous men and

wine-bibbers, and riotous eaters of flesh." If, in a third particular—that of *exercise*—they are intemperate also, excess in it may to a considerable extent counterbalance the ill effects of over-indulgence; but if, on the contrary, they are indolent and sedentary, their lives, if merry, will also be short, and ought not to be accepted without an addition of ten, fifteen, or twenty years. We cannot pass by unnoticed another form of excess, which unhappily is ever on the increase among all classes of the population. Habits of debauchery and vicious indulgence, which multitudes seem to regard as the natural and necessary accompaniments of youth, are sapping not only the morals, but the physical strength, of very many of the rising generation. The physical exhaustion which such habits induce is not unfrequently the forerunner of epilepsy, chronic disease of the brain, and creeping palsy, as it is popularly and very aptly termed. And when constitutional disease has been once contracted, it is hard to say when it is expelled from the system. Not unfrequently, those who had believed themselves long and entirely free from taint have become subject to excruciating head-ache, followed by fatal convulsions, dependent on syphilitic tubercle in the membranes of the brain. It is a fair question for discussion, whether anyone who has had secondary symptoms should be accepted without a very large addition?

In the same category as the *gourmand*, we must place men of a very different stamp, to whom we have already referred once and again—those, namely, whose meals occupy far too small a share of their thoughts and time, and whose health is, consequently, in the course of a few years, greatly impaired or permanently damaged. Among men of business, irregular and hurried meals—in other words, the habits of long fasting and of fast eating—are making prematurely old a large proportion of the present generation. Those, again, who of their own free will are induced, or by the nature of their occupation are compelled, to turn night into day, and to deny themselves that repose which nature craves, and without which its powers must sooner or later flag, or suddenly collapse, cannot expect to be long-lived. Chomel states, as the result of forty years' experience, that "one scarcely ever sees those who spend the day in sleeping and the night in watching, reach an advanced age." And the evil is greatly aggravated, if, in order to drive away sleep and keep up a false excitement, recourse is had to stimulants, as brandy, opium, or frequent draughts of strong tea or coffee, which, in the long run, shatter the nervous system, and so weaken the digestive organs that they never fully recover their healthy tone and vigorous action. We have surely said enough to make plain to all how very extensive is the

class of *doubtful* lives, and how important is any proposal which tends to lessen the inequalities inseparable from the present method of estimating their probable value.

III—Under what circumstances, if any, is a *diseased* life assurable?

In the present state of our knowledge, it is impossible to lay down any precise rules in regard to the acceptance of lives actually diseased. It is only by the accumulation of the recorded experience of many Life Offices, extending over a long term of years, that we can hope to arrive at any general results. When many reports, characterised by the accuracy and distinguished ability of those drawn up for the Scottish Widows' Fund, and Standard Life Offices, by Drs. Begbie and Christison, shall have been issued by other long-established companies, we may hope for some clearer light to guide our decisions, which are meanwhile little better than guesses at truth, and often very wide of the mark. Each separate case must be judged on its own merits or demerits, and where mere opinion has so much to do with the result, each one of a dozen medical examiners may come to a different conclusion on a given case. We can, therefore, do no more than offer a few hints as to the principles and considerations which are most likely to influence medical opinion.

We premise that there are three conditions that will induce a medical examiner, for the sake of the proposer as well as of the company, to *suspend* his decision.—1. The presence of *active* disease of any kind. A common cold, if left to take care of itself, often grows into a severe bronchitis, a pleurisy, an inflammation of the lung, a spitting of blood, or a consumption. An unheeded sprain of the knee or ankle may lead to white swelling, and reveal a scrofulous constitution till then unsuspected. The ball of the great toe, chafed in walking, may, after many months of slight irritation, become the seat of the first of a series of gouty attacks. 2. *Recent* disease. For some time after measles, a severe influenza, a continued fever, or an inflammation of the lung, incautious exposure may quicken the latent seeds of consumption into rapid growth: an attack of jaundice may be the forerunner of incurable disease of the liver; and dysentery may leave behind it serious disorder of the bowels. In all such cases, the rule is to wait a little.—3. *Recurrence* of disease. While some complaints, as scarlatina and typhus fever, protect those who have had them from a second attack, other ailments have a remarkable tendency to repeat themselves. We have known erysipelas and quinsy recur scores of times; annual attacks of bronchitis are very common; and a like recurrence of pleurisy and inflammation of the lung is by no means rare. The

liability of neuralgic disorders, of gout, rheumatism, and ague to return, is well known; and the very frequent recurrence even of a common cold will tell strongly against accepting a life without a large extra premium.

We gather from these negative statements the general principles which must guide us in dealing with diseased lives. Where active disease is not present, has not recently existed, and shews no disposition to return, there is a *prima facie* case in favour of entertaining the proposal. But we must always bear in mind that the risk incurred, and the caution required in accepting it, are in proportion to the importance and the liability to incurable disorder of the organ which has been affected or threatened. It is this, to take one example from the class of *general* diseases, which forbids the acceptance of a rheumatic life at ordinary rates. It is not the rheumatism itself, but its tendency to return, and its very frequent association with affections of the heart, that make it an object of fear to the assurer. It is this also which makes dropsy so generally a positive bar to assurance. It points, in the great majority of instances, to incurable disease of the lungs, heart, kidney, or liver. The only forms of dropsy which do not absolutely negative the acceptance of a life are those which, accompanying scarlatina and diphtheria, often leave the kidney uninjured, and that which depends on poorness of blood and general weakness. Persons who have been threatened with affections of the brain, spinal cord, heart, lungs, liver or kidneys, must be looked upon with great suspicion, though, after a long period of complete immunity from anything like a return of the previous alarming symptoms, their proposals may be entertained. Let us very briefly illustrate this statement by examples. As regards the brain, there are cases which—though for long apparently shut out from the benefits of Life Assurance, owing to the repeated occurrence of fits during childhood and subsequent tokens of imbecility—have been accepted at a large extra premium, and might even, under the system now proposed, obtain the Policies at ordinary rates. The acceptance of such cases, however, can only be warranted by the entire absence, for many years, of any threatening of head affection, the steady improvement of the mental powers, freedom from sudden fluctuations of spirits, and the greatest regularity of habits and mode of life. Heart disease, again, is suspected by many where none exists, and often exists to a very serious extent where none is suspected. Palpitations, which are frequent and very annoying in dyspeptics and persons of nervous temperament, are very often unconnected with organic disease, and like the morbid sound which is present in persons of pale complexion and lymphatic temperament, generally

disappear under judicious treatment; but where there has been a threatening of inflammation of the heart during an attack of rheumatic fever, even though many years may have elapsed without palpable signs of disease, there should be an addition of 10 years to the life. If asked at what rate a person with really diseased heart might be assured, we cannot do better than select the least serious form of heart affection, that, namely, where the valves of the aorta present some obstacle to the free outflow of the blood from the heart during its contraction. Such a case might *perhaps* be accepted with an addition of 15 or 20 years. There are exceptional cases, no doubt, such as that of the late Lord Campbell, where very great disease of those valves, and enormous enlargement of the heart, did not interfere with his comfort or capacity for exertion, or prevent his attaining a great age in the enjoyment of unbroken health.* Under the system now proposed, a Policy might, even in such a case, be obtained at ordinary rates. But, as a general rule, a damaged heart, *which tends daily to become more so*, cannot very long exist without damaging the general health.

If asked what course we should follow where a proposer has had spitting or vomiting of blood, here is our answer. Blood-spitting may occur during a fit of coughing in simple bronchitis, may leave no trace of mischief behind, and may never again show any disposition to return; or it may be attended with bloody engorgement of the lung, which gradually disappears, and gives rise to no consumptive symptoms; or it may recur time after time, accompanied with increasing cough, general wasting, and other symptoms of decline. The first case mentioned would be received by most medical examiners, after the lapse of a year or two, as a good ordinary life; the second would probably be received with the addition of 7 or 10 years; the third would be unhesitatingly rejected. Vomiting of blood, again, may occur once in a life-time, without any suspicion of organic disease either of the stomach or liver; or it may depend on ulceration of the stomach; or lastly it may be, and often is, the first indication of incurable disease of the liver. In the first instance, after some years of perfect freedom from digestive derangement, the addition of 5 years would probably suffice to cover the risk; in the second, if the characteristic symptoms of ulceration have entirely passed away, the life might be accepted with an addition of ten years; in the third it would

* I am informed by my colleague, Mr. Nunn, who was present at the *post mortem* examination of the body of the late Lord Chancellor, that the diseased condition of the aortic valves must have existed during a very long period, as the valves were completely ossified.

of course be declined. So likewise we can conceive the acceptance at ordinary rates of a person who has had a single attack of jaundice, unattended by symptoms of gall-stone, and not occasioned by intemperate habits; but if there have been several, and these accompanied either with unequivocal symptoms of gall-stone, or with bilious diarrhoea, the risk will probably be declined by every prudent office. In the last instance, especially, the presumption of intemperance is so strong that it is right to act upon it.

We conclude with the general remark, that in dealing with this class of lives, trifling additions, as of 3 and 5 years, are in most instances quite out of place. The reports of Drs. Begbie and Christison shew that, in cases of consumptive and rheumatic predisposition, they are quite insufficient to protect the assurer.

IV.—In reply to the question, What are the unmistakeable signs of a life that must be declined? we need only say, in addition to what has been stated above, that persons who have had an apoplectic seizure, or are suffering from its consequences, those who are labouring under softening of the brain or spinal cord, or chronic inflammation of the membranes of either, epileptics and others who have a marked tendency to insanity, those who have long been subject to tic or other inveterate forms of neuralgia, who are engaged in callings or have formed habits likely to induce disorders of the nervous system, who have suffered long from asthma, who present indications of active scrofulous or tubercular disease, who have had repeated attacks of pleurisy, who have manifest organic affection of the heart, lungs, liver, kidneys, or spleen, or dropsy dependent on an unhealthy state of one or more of these organs, who suffer from chronic disease of the bladder, from diabetes, from confirmed gout or rheumatism, or from any form of cancer, are NON-ASSURABLE Lives.

OPINIONS OF THE PRESS
ON THE
London and Yorkshire Assurance Company's
NEW SCHEME
FOR
ASSURING DISEASED AND DOUBTFUL LIVES.

Post Magazine and Insurance Monitor, August 31st.—The subject is one of the greatest importance; and it has been dealt with at some length and with marked ability in a pamphlet written by Mr. Morrice Black, Actuary to the *London and Yorkshire Assurance Company*. His object is to show that instead of increasing the rate of premium on such lives, the ordinary tabular rate, at the proposer's real age, might be adhered to, under certain special provisions.

September 14th, 1861.—In connection with our first notice of Mr. Black's pamphlet we gave several extracts from a highly interesting chapter by Dr. A. P. Stewart, "On the Characteristics of Insurable and Non-insurable Lives." We are tempted to make another quotation from this valuable portion of the pamphlet. . . . Enough, we think, has been quoted to show that a copy of this pamphlet ought to be in the possession of every Insurance Agent in the kingdom, as well as of every medical man who is called upon for the objects of Life Assurance, to furnish a professional opinion for the guidance of a Company.

Morning Chronicle, December 27th (City Article).—Rapid as may have been the progress of Life Assurance during the last ten or twenty years compared with the increase previously, it cannot be doubted that it is yet but in its infancy. . . . It was only in the year 1824 that the practice of assuring lives deviating from the recognized standard of health was first projected, but even after thirty-seven years' adoption of the plan, there is no recognized system of action on the part of the different companies that insure such lives, their tables of premiums being computed for first-class lives. Diseased and doubtful lives are thus comparatively excluded, excepting a few offices at higher rates of premium. On this very interesting and really important subject it has been the aim of Mr. Morrice A. Black, Actuary to the *London and Yorkshire Assurance Company*, to throw some light by elucidating its workings on companies and assurers. In a pamphlet entitled "The Assurance of Diseased and Doubtful Lives on a New Principle," this gentleman enters very fully into the investigation of the entire matter. Mr. Black has undoubtedly thrown much light upon a very dark and obscure subject, and while his new scheme of Life Insurance cannot fail to directly extend the business of the *London and Yorkshire Assurance Company*, it will tend to increase that of all similar concerns, its great aim being to extend the practice of Life Insurance.

The News and Bankers' Journal, July, 1861.—The Actuary of the *London and Yorkshire Assurance Company* has engrafted upon the ordinary tables of that Society a plan which renders a diseased or doubtful life quite as eligible for Assurance as any ordinary case. His plan is to accept the life at a premium usually charged for persons of the same age, at the same time protecting the Company, in case of early death, by a sufficient and equitable reservation. . . . The plan is, in its general bearings,

decidedly in advance of the ordinary method where diseased lives are concerned. Of this there can be no question, and we have, therefore, no hesitation in commending it to the invalided public, and the assurance world generally, as worthy of attention.

January 11th, 1862.—Life is subject to such manifold and complex contingencies that the most careful diagnoses, by the most competent observers, under the most favourable conditions, do not do more than afford a very unsatisfactory guarantee, in an aggregation of instances, of superior health and long life. *These considerations, obvious enough to all who take pains to think for a moment, lie at the foundation of Mr. Black's plan for the assurance of diseased and doubtful lives. It is because there is so much uncertainty in individual cases, arising from imperfect data to judge from, as well as from imperfect data imperfectly examined, that he has marched a head of ordinary practice, and constructed a scheme which, whatever its other merits, or demerits, certainly secures to insurants, of the diseased and doubtful class, a privilege—a chance which, under the ordinary system, they cannot obtain.* *At any rate, it is, we apprehend, beyond question, that any candidate who regards himself as unjustly used by the deteriorated estimate made of his life by any office to which it may have been offered for assurance, has, under Mr. Black's plan, the remedy in his own hands, and with that he may surely be content.*

Insurance Gazette, September 1st.—We have received at the moment of going to press, a very able pamphlet by Mr. Black and Dr. Stewart, of the *London and Yorkshire*, detailing an excellent plan for the assurance of doubtful lives, which their office has adopted.

Money Market Review, March, 1862 (Leading Article).—We have had our attention called to a very cleverly and clearly-written pamphlet, which has just made its appearance, and which possesses considerable interest to the Insurance world, and to intending Assurers, particularly to the “low” order of lives. It is entitled “The Assurance of Diseased and Doubtful Lives on a New Principle,” and is written by Mr. Morrice A. Black, Actuary to the *London and Yorkshire Assurance Company*. That the science of Life Assurance is yet almost in its infancy, and that it will assume much larger dimensions than those yet attained, we have no manner of doubt. Why it progresses so slowly may be attributed to many causes, and probably to none more than to this—that the Assurance Offices will take few but the best lives, and those are the lives least inclined to assure. But, apart from these causes, there is no class of society more to be pitied than those who have “diseased and doubtful lives.” The affliction of ill health is bad enough, but the burden is increased tenfold when the sufferer knows he cannot protect his family from the consequences of his death, so far as regards making any provision for them by insuring his life. Now, it is very probable that this is the class who would most largely avail themselves of the provision of Assurance if they could; but hitherto they have been prevented doing so by Assurance Offices rejecting their lives, or charging so large an annual premium for the increased risk that is too heavy to be borne. Any Assurance Office, therefore, that starts a plan which, while it enables possessors of “diseased and doubtful lives” to make provision for their death without increasing the annual premium paid on ordinary lives, and reserves the risk they run to be paid *after death*, makes a great stride in meeting the objections we have referred to. We refer our readers to the pamphlet for an elaborate exposition of this new principle. It is there fully, and, we think, successfully worked out. Our impression is that while the risk is not greater than that usually incurred, the plan is much more advantageous to the assured, and calculated to extend the wholesome practice of Life Assurance amongst a large class hitherto debarred from its benefits.

